

Remarks

The claims have been amended by rewriting claim 15 as an independent claim, adding dependent claims 20-30 with subject matter based on original claims 4-14, and retaining original claims 18 and 19. As a consequence of the above-described amendments, claims 1-14, 16 and 17 have been canceled.

Support for amended claim 15 is found on lines 4 to 8 of page 9 and on lines 2 to 5 of page 4.

Claims 1-10, 15, 18 and 19 remain rejected under 35 USC 103(a) as being unpatentable for obviousness reasons over Fuentes-Afflick et al. (EP 947576 A1) in view of Frühauf (US 4,129,508) and Bloch et al. (WO 93/21288).

Fuentes-Afflick et al. disclose a fuel additive composition comprising (a) a hydrocarbyl-substituted amine or a poly(oxyalkylene) amine and (b) an ester of a carboxylic acid and a polyhydric alcohol such as glycerol monooleate where the additive composition with gasoline in a fuel composition reduces fuel consumption. Fuentes-Afflick et al. do not disclose the alkoxylated fatty amine of the present invention.

Frühauf discloses lubricant and fuel compositions containing an additive combination of (a) a reaction product of a succinic acid or anhydride and a polyalkylene glycol, (b) an organic basic metal salt, and (c) an alkoxylated amine where the combination functions as a demulsifier.

Bloch et al. disclose lubricating oil compositions containing a friction modifying combination of (a) an alkoxylated hydrocarbyl amine and (b) a polyol partial ester of a fatty acid where the lubricating oil compositions provide enhanced fuel economy when used as a lubricating oil for an automotive internal combustion engine or transmission.

Amended claim 15, newly added claims 20-26 which are based on now canceled claims 4-10, and claims 18 and 19 deal with a fuel composition comprising gasoline and a gasoline additive concentrate that comprises a solvent such as an aromatic hydrocarbon, an alkoxylated fatty amine, and a partial ester having at least one free hydroxyl group and formed by reacting a fatty carboxylic acid and a polyhydric alcohol where the fuel composition reduces fuel consumption and the solvent allows the additive concentrate to remain a liquid at low temperatures.

There is not a reasonable expectation of success to modify the ester of Fuentes-Afflick et al. by adding the alkoxylated amine of Friihauf. Fuentes-Afflick et al. deal with a fuel additive composition for reducing fuel consumption while Friihauf deals with an additive combination for demulsifying lubricants and fuels. One of ordinary skill in the art would not be motivated to modify the ester of Fuentes-Afflick et al. by adding the amine of Friihauf with a reasonable expectation of success in reducing fuel consumption since Friihauf deals with demulsification, not reducing fuel consumption. *not added in reaction*

There is no motivation or suggestion to modify the ester of Fuentes-Afflick et al. by adding the alkoxylated hydrocarbyl amine of Bloch et al. Fuentes-Afflick et al. deal with a fuel composition containing a fuel additive composition for reducing fuel consumption while Bloch et al. deal with a lubricating oil composition containing a friction modifying combination for enhancing fuel economy. There is no teaching or suggestion in Fuentes-Afflick et al. or Bloch et al. to modify Fuentes-Afflick since Fuentes-Afflick deal with fuel compositions while Bloch deal with lubricating oil compositions.

Furthermore, the three references, Fuentes-Afflick et al., Friihauf, and Bloch et al., when combined, do not disclose or suggest the claim limitation that the concentrate of the present invention contains a solvent that allows the concentrate to remain a liquid at low temperatures.

Another reason for the nonobviousness of the present invention in claims 15, 20-26, 18 and 19 is the unexpected reduction in the coefficient of friction seen in the data in Table 3 on page 10. The combination of the ester GMO and the amine in Examples 7, 9 and 11 consistently provides a greater reduction in the coefficient of friction when compared at an equal total treatment level to GMO alone in Examples 6, 8 and 10. *claims commensurate in scope with data*

Applicants respectfully submit that claims 15, 20-26, 18 and 19 are patentable over Fuentes-Afflick et al. in view of Friihauf or Bloch et al. based on the amended claims and the foregoing remarks.

Claims 11, 12 and 16 remain rejected under 35 USC 103(a) as being unpatentable for obviousness reasons over Fuentes-Afflick et al. in view of Friihauf and Bloch et al. and further in view of Wyman (US 3,250,715).

The tertiary reference Wyman discloses terpolymers which can function as pour point depressants in lubricants.

New claims 27 and 28 depend directly or indirectly from amended claim 15 and are based on now-canceled claims 11 and 12. Applicants respectfully submit that claims 27 and 28 are patentable over the combined primary, secondary and tertiary references since claims 27 and 28 depend from a patentable claim that was submitted hereinabove regarding claim 15.

Claims 13, 14 and 17 remain rejected under 35 USC 103(a) as being unpatentable for obviousness reasons over Fuentes-Afflick et al. in view of Friihauf and Bloch et al. and further in view of Schilowitz et al. (US 5,094,667), Pierce-Ruhland et al. (US 5,407,453), Malfer et al. (US 5,697,988) and Moreton (US 5,876,468).

The four tertiary references disclose nitrogen-containing detergents. Schilowitz et al. disclose use of Guerbet alkyl ether mono amines in distillate fuels to reduce intake valve deposits. Pierce-Ruhland et al. disclose a composition that includes a polyisobutenyl amino ethylethanolamine for cleaning a fuel induction system. Malfer et al. disclose a fuel additive composition that includes a Mannich reaction product for deposit control. Moreton discloses a Mannich reaction product that has good detergency properties in hydrocarbon fuels.

New claims 29 and 30 depend directly or indirectly from amended claim 15 and are based on now-canceled claims 13 and 14. It is submitted that claims 29 and 30 are patentable over the combined primary, secondary and tertiary references since claims 29 and 30 depend from a patentable claim as submitted above regarding claim 15.

It is submitted that claims 29 and 30 are nonobvious because of the unexpected increase in fuel economy provided by a fuel composition of the present invention that also includes a nitrogen-containing detergent. In Table 1 on page 9, the fuel composition of Example 2 contains a partial ester, alkoxyated amine and nitrogen-containing detergents and gives a 9-fold increase in Sequence VIB Stage 1 fuel economy and a 2.6-fold increase in Stage 2 fuel economy compared to the fuel composition of Example 1 containing the partial ester and alkoxyated amine but no nitrogen-containing detergents. Applicants respectfully submit that claims 29 and 30 are also patentable over the combined primary, secondary and tertiary references due to the

unexpected benefit in fuel economy performance provided by a fuel composition of the present invention that includes a nitrogen-containing detergent.

Claims 1-10 remain rejected under 35 USC 102(b) as being unpatentable for novelty reasons in view of Bloch et al. (WO 93/21288).

Bloch et al. as described above disclose lubricating oil compositions that contain an oil of lubricating viscosity and a friction modifying combination of (a) an alkoxylated hydrocarbyl amine and (b) a polyol partial ester of a fatty acid and that provide enhanced fuel economy when used as a lubricating oil for automotive internal combustion engines and transmissions.

New claims 20-26 depend directly or indirectly from amended claim 15 and are based on now-canceled claims 4-10. The subject matter of amended claim 15 is a fuel composition containing gasoline and the concentrate composition of the present invention. Bloch et al. disclose a lubricating oil composition containing an oil of lubricating viscosity, but Bloch et al. do not disclose the fuel composition of the present invention that contains gasoline.

Applicants respectfully submit that based on the claim amendments and above remarks that claims 15 and 20-26 are novel and not anticipated by Bloch et al.

From the foregoing amendments and remarks, it is submitted that the present claims are in condition for allowance and that the reply to the Advisory Action and preceding Office Action is fully responsive. An early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the undersigned is suggested.

Any deficiency or overpayment in fees for this application can be charged or credited to Deposit Account No. 12-2275 (The Lubrizol Corporation).

Respectfully submitted,
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Amendment with Markings

Claim 15 has been amended as follows:

15. (amended) A fuel composition, comprising:

gasoline; and

a [the] gasoline additive concentrate composition [of claim 1], comprising:

a solvent that is an aromatic hydrocarbon, a mixture of an alcohol and an aromatic hydrocarbon, or a mixture of an alcohol and a kerosene having some aromatic content; cl. 2

an alkoxyated fatty amine; and

a partial ester having at least one free hydroxyl group and formed by reacting at least one fatty carboxylic acid and at least one polyhydric alcohol wherein the fuel composition reduces the fuel consumption of a gasoline internal combustion engine, and the solvent allows the concentrate composition to be a liquid at a temperature of about 0°C to minus 18°C. cl. 3

New claims 20-30 have been added.

Claims 1-14, 16 and 17 have been canceled.